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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/443,401	11/19/1999	SAID ZAMANI-KORD	10991745-1	7179

22879 7590 06/21/2004

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EXAMINER

DICUS, TAMRA

ART UNIT	PAPER NUMBER
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1774

DATE MAILED: 06/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/443,401	Applicant(s) ZAMANI-KORD ET AL.	
	Examiner Tamra L. Dicus	Art Unit 1774	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 February 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2,4,6-18,20-28,32 and 35-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2,4,6-18,20-28,32 and 35-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Response to Amendment

The 102 and 103 rejections (over Hardwick et al. in view of Howland) are withdrawn due to Applicant's amendment. Cancellation of claims 1, 3, 5, 29-31, and 33-34 is acknowledged.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 2, 4, 6-28, 32, and 35-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,471,247 to Hardwick et al. in view of USPN 6,089,614 to Howland et al. and further in view of USPN 5,492,370 to Chatwin et al.

Hardwick teaches banknotes incorporating security devices that comprise a planar substrate (10) (instant claim 32) having a first and second indicia surrounding the first and second surfaces of substrate (10), see Figure 6. The inks to print the indicia may be of titania or fluorescent type, see col. 4, lines 30-35. Hardwick teaches two individual ink layers above and below the substrate (first and second thin layers of a substrate material of instant claim 8). Hardwick is silent to teaching a foil or reflective layer between the two indicia. However Howland teaches a security device with first (7) and second (8) indicia with a metallized substrate in the middle (1). The substrate can be coated with a very thin film of aluminium (equivalent to thin metal foil layer of instant claim 2), metal oxide or other reflective layer (reflective barrier functional equivalent of instant claims 15-22) at col. 3, lines 23-33. Hence it

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would have been obvious to one of ordinary skill in the art to modify the banknote of Hardwick to include a metallized, foil, or reflective layer as the substrate since Howland teaches metallizing a substrate to exhibit such properties as high reflectivity and also enable the second indicia to be viewed in transmitted light at col. 3, lines 29-33. To the means for preventing interference during a detection process having sufficient thickness and opaqueness to prevent passage of signals and to reflect illumination energy, one would expect the layers to function in a similar manner as the same materials and layered structure are provided. That a substrate structure is illuminated by illumination energy of a predetermined wavelength or range that causes fluorescence is a product by process limitation. Product-by-process claims are not limited to the manipulations of the recited steps, only the structure implied by the steps. Patentability of an article depends on the article itself and not the method used to produce it (see MPEP 2113). Furthermore, the invention defined by a product-by-process invention is a product NOT a process. *In re Bridgeford*, 357 F. 2d 679. It is the patentability of the product claimed and NOT of the recited process steps which must be established. *In re Brown*, 459 F. 2d 531. Both Applicant's and prior art reference's product are the same. Hardwick does not teach further comprising a print medium, tape having first and second surface (tape layer), or roll of claims 12-18, 20-28, and 35-37. However, Chatwin teaches several print medias such as a glass or tax certificate adhered to the substrate via a self adhesive film/layer (tape) at col. 11, lines 50-65 and col. 12, lines 1-25. Hence it would have been obvious to one of ordinary skill in the art to modify the banknote of Hardwick to further include a print medium and tape layer for the purpose of producing vehicle tax certificates as taught by Chatwin at col. 11, lines 50-65 and col. 12, lines 1-25.

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The property of the fluorescent material of claim 10 is inherent as the same materials are used as Hardwick.

Regarding instant claim 11, since the same position of the indicia is taught, the indicia is in overlapping relation.

Hardwick is silent to stating the specific polymer used in the plastic substrate (instant claim 9). However, Chatwin teaches a decorative article that comprises a plastic metallized substrate of polyester at col. 6, lines 20-25. Hence it would have been obvious to one of ordinary skill in the art to modify the banknote of Hardwick to include polyester since it is well known functional equivalent polymeric film as Chatwin teaches at col. 6, lines 20-30.

Hardwick is silent to teaching the specific metal oxide used in the reflective layer (reflective barrier functional equivalent of instant claims 15-22). However, Chatwin teaches well known metal oxides such as titania (radiation blocking-instant claim 7) at col. 8, lines 5-9. Further taught within col. 8, Chatwin also teaches alternatively an opaque coating of aluminum provides partial transparency and not full transparency, thus providing opaque functionality as required by instant claims 12-15 and 35-37. Hence it would have been obvious to one of ordinary skill in the art to modify the banknote of Hardwick to include a metal oxide such as titania since it is a suitable functional equivalent used for providing a high reflective index as taught by Chatwin at col. 8, lines 1-9.

Chatwin teaches at col. 6, line 39, the substrate may be in roll form (instant claims 14 and 31). Hence it would have been obvious to one of ordinary skill in the art to modify the banknote of Hardwick to include a substrate in roll form since Chatwin teaches a substrate can be in roll form to be cut and sized at col. 6, lines 40-43.

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While Hardwick does not define the structure of claims 12-28 and 35-37, Chatwin teaches indicia may be coated on one or both sides of the polymeric substrate at col. 5, lines 45-58. Tape is a polymeric substrate and hence it is obvious to include a reflective material disposed on either side since the references teach metallizing, or providing metal oxide or reflective coatings to a plastic film is known to provide optical variable effects as taught by Chatwin at col. 5, lines 34-40, col. 6, lines 28-33.

Response to Arguments

Applicant's arguments filed 2-26-04 have been fully considered but they are not persuasive. Applicant argues that Howland nor Chatwin do not provide a means for interference as there is no teaching or suggesting of such a means and for this reason alone a *prima facie* case has not been established. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

The arguments of counsel cannot take the place of evidence in the record. *In re Schulze*, 346 F.2d 600, 602, 145. Applicant has not proven the layers of indicia and metal as described in Howland do not reflect or prevent interference as Applicant desires. Howland teaches a security device with first (7) and second (8) indicia with a metallized substrate in the middle (1). The indicia are printed with conventional inks such as fluorescing inks. See col. 8, lines 12-20. That the structure has a means for preventing interference is inherent as the same layered structure and

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materials are provided by Howland. Applicant further argues that there is no showing of any advantage to be achieved by adding the very thin metal layer of Howland to Hardwick. *Prima facie* obviousness is not rebutted by merely recognizing additional advantages or latent properties present in the prior art. Mere recognition of latent properties in the prior art does not render nonobvious an otherwise known invention. *In re Wiseman*, 596 F.2d 1019, 201.

Applicant points to col. 3, lines 31-33 of Howland to allege the cited passage describes a coating that is sufficiently transparent when viewed in transmitted light. However, this passage does not teach that the metal oxide coating of aluminum cannot necessarily be opaque or perform the prevention means as Applicant claims. The layer is opaque and metal so it can reflect and interfere with light even though reference does not specifically state this. Further, Chatwin teaches that a same metal oxide coating of the same aluminum is an opaque coat (col. 8). A *prima facie* case has been established, and therefore the burden shifts to the Applicant to submit additional objective evidence of nonobviousness, such as comparative test data showing that the claimed invention possesses improved properties not expected by the prior art. Until the Applicant can show and prove any results that would not obvious, the rejection will stand. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). Applicant alleges evidence of suggestion is not provided for by the

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prior art. The same structure is provided, first indicia/metal/second indicia as Howland teaches as previously set forth. The first and second indicia can't interfere because the metal is in between them. Applicant has not fully disclosed what kind of "interference" he is claiming, i.e. ink interference, light interference, energy interference, etc. Because there is no objective evidence provided by the Applicant, the Examiner contends that since the same structure is provided, then the same elements are used to provide the same functionality as preventing interference. Further, what happens to them under certain external conditions (e.g. during a detection process when illuminated) is inherently provided because the same materials are used. Moreover, as written, the claim states a reflective layer between first and second indicia **prevents passage** of the first and second indicia signal during a detection process. "Preventing passage" is taken to mean the "means for preventing interference". Applicant has not claimed a certain type of ink composition that may be different from what Howland provides and until such limitation is introduced, the rejection will stand as is. Howland provides first and second fluorescent inks and a reflective layer (barrier equivalency) between them, which a metal layer is equivalent to.

Applicant further argues that there is no advantage of adding a thin metal of Howland to Hardwick. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir.

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1992). In this case, Howland and Hardwick teach indicia and modification of indicia for security devices. The advantage, as previously stated, lies within the metallized substrate in the middle serving to produce high reflectivity and enable a second indicia to be viewed in transmitted light as taught by Howland at col. 3, lines 29-33. Applicant further argues that such teaching would not provide a means for preventing interference. The metal disposed between the ink layers serve to provide this function. Applicant has not provided any objective evidence to state any different. The indicia of each layer does not interfere because the metal layer lies between the two ink layers, which the Examiner takes to be equivalent to a means for preventing interference. Applicant does not show that the metallized or reflective layer of Chatwin cannot interfere with the signal. If something is reflective, it is expected to reflect the light (signal). The light would not be transmitted through. It would be expected that the light would be interfered with and prevent passage as that is their function.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tamra L. Dicus whose telephone number is 571-272-1519. The examiner can normally be reached on Monday-Friday, 7:00-4:30 p.m., alternate Fridays. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly can be reached on 571-272-1526. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tamra L. Dicus
Examiner
Art Unit 1774

CYNTHIA H. KELLY
SUPERVISORY PATENT EXAMINER
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June 9, 2004

